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ON THE FALL OF RAIN IN SEPTEMBER, 1866.

The rainfall of the past month has been, in the greater part of England, so exceptionally heavy, that it would well have merited special notice, even had there been no national and material interests involved; but when we are told, on high authority, that towards the close of the month each day's rain caused injury to the amount of nearly half-a-million sterling, it indeed behoves us to place the facts before our readers as fully and clearly as we can. Obviously the results of the comparatively few returns yet received *may* be modified when the whole are collected at the end of the year, but we anticipate amplification, not reversal of the indications afforded by the following tables.

Table I. is a continuation for the subsequent three months of 1866 of that given in *Meteorological Magazine*, No. VI. *p.* 58, whence the general distribution of rain during the present year may readily be seen; the leading facts being that the fall in the first six months has been nearly doubled by the subsequent three, and the nine months have had nearly (in some cases more than) 12 months' supply.

Table II. requires no explanation, and few remarks; the one most striking fact being the presence of the Devonshire returns amid and even above those from Westmoreland and Wales; and in fact the general reversal of ordinary position, consequent, as will be seen hereafter, on the *relative* excess having been less in the districts of (ordinarily) greatest rainfall.

Table III. is arranged with a view to showing the districts where the excess had been most remarkable; that is to say, where the proportion of the excess to the mean fall was the greatest. Perhaps we may be excused for elucidating this point, since we have been requested to do so on a previous occasion. In Table III. it will be seen that at Taunton the fall was 5·22 inches above the average, and at Goodamoor it was 9·75 inches above; yet the lesser excess is placed above the greater; it is so for this reason—viz., the total at Taunton is 6·88, and the excess is 5·22, hence the mean there is 1·66; then 5·22 is 4·13 times the average; but 9·75 at Goodamoor will be found to be only 3·09 times the average.

The design of this table being to show where the fall was most remarkable and unusual, the returns have been grouped in the order of decreasing relative excess, until indeed the last two stations had less than their average, Portree, in the Isle of Skye, having only 84 per cent. of its average, and Sandwick, Orkney, only 72 per cent.—a wonderful contrast to the fall in the south, where it was generally double

the average, in some places threefold, and at one is returned as more than four times the average.

TABLE I.—Rainfall in the first Nine Months of 1866.

STATIONS.	Total of first 6 months.	July.	Aug.	Sept.	Total of 9 months.	Average. 1860-65.	Difference.
England & Wales.							
Camden Town	17·08	1·19	2·76	3·89	24·92	18·51	+ 6·41
Linton Park	16·95	2·73	2·15	4·25	26·08	19·17	+ 6·91
Selborne	21·60	1·38	2·66	6·52	32·16	22·62	+ 9·54
Banbury	12·35	2·08	3·52	5·63	23·58	18·94	+ 4·64
Culford	14·30	2·25	3·39	3·01	22·95	17·01	+ 5·94
Goodamoor	28·46	2·42	6·52	14·40	51·80	39·12	+12·68
Barnstaple	18·22	2·60	3·99	7·07	31·88	28·14	+ 3·74
Taunton	17·00	1·79	1·65	6·88	27·32	19·16	+ 8·16
Shrewsbury	11·88	1·61	4·36	5·19	23·04	19·03	+ 4·01
Orleton	16·75	2·17	2·99	6·68	28·59	22·40	+ 6·19
Wigston	10·95	2·21	4·41	5·43	23·00	18·12	+ 4·88
Derby	12·47	2·41	6·56	4·79	26·23	19·13	+ 7·10
Manchester	14·22	4·31	5·12	7·13	30·78	24 74	+ 6·04
York	9·69	2·91	3·06	4·04	19·70	17·09	+ 2·61
Arncliffe	30·25	5·24	5·33	11·19	52·01	38·74	+13·27
N. Shields	10·05	3·70	3·24	3·60	20·59	19·04	+ 1·55
Seathwaite	75·81	11·18	12·69	21·35	121·03	103·52	+17·51
Haverfordwest	26·24	1·55	5·00	9·51	42·30	31·48	+10·82
Cefnfaes	23·76	2·41	4·21	6·98	37·36	31·42	+ 5·94
Scotland.							
Dumfries	14·80	2·84	3·27	5·88	26·79	25·94	+ 0·85
Auchendrane	20·61	3·32	4·86	5·91	34·70	30·15	+ 4·55
Nookton	13·22	2·87	3·42	2·73	22·24	19·87	+ 2·37
Deanston	21·42	3·27	6·14	5·89	36·72	29·74	+ 6·98
Portree	45·00	3·90	7·84	9·11	65·85	51·34	+14·51
Sandwick	18·27	1·64	3·24	2·65	25·80	23·90	+ 1·90
Ireland.							
Waterford	19·23	·85	3·49	3·96	27·53	27·65	— ·12
Killaloe	25·58	1·96	4·55	6·47	38·56	33·30	+ 5·26
Portarlington	16·19	1·22	2·63	4·16	24·20	29·14	— 4·94
Monkstown	16·46	·89	2·22	2·70	22·27	21·40	+ ·87

TABLE II.—Rainfall in September 1866. Stations arranged according to amount.

The Stye, Borrowdale	22·62	Coniston	12·10
Seathwaite, ,,	21·35	,,	11·76
Sprinkling Tarn	19·80	Arncliffe, Skipton	11·19
Snowdon, Hafod-y-llan	18·48	Chepstow	10·57
Stonethwaite	17·83	Vicarage, Kirkby Lonsdale	9·92
Stye Head	17·44	Kendal	9·77
Beddgelert	16·71	Casterton, Kirby Lonsdale	9·76
N. Hessary Tor, Dartmoor	16·71	Haverfordwest	9·51
Rhiwbryfdir	16·37	Fort William, Inverness	9·43
Prison Reservoir, Dartmoor	15·05	Portree, Isle of Skye	9·11
Goodamoor, Plymouth	14·40	Belgrave, Sidmouth	8·87
High Close, Grasmere	14·35	Bolton-le-Moors	8·66
Mosedale	13·86	Lancaster	8·04
Abercarn, Monmouth	13·39	West Hoathly, Sussex	7·72
Llanberis, R. Victoria Hotel	13·05	Weymouth	7·54
Esk House	12·54	Presteign, Radnor	7·52
Tynant, Cardiff	12·50	Clifton, Gloucester	7·40
Dolgelley	12·46	Wainsford, Lymington	7·40
Cardiff	12·10	Shirley Warren, Southampton	7·34

TABLE II.—(*continued.*)

Manchester	7·13	Highfield House, Nottingham	4·97
Riverhead, Sevenoaks	7·09	Cessnock Park, Glasgow	4·84
Marlborough College	7·07	Derby	4·79
Barnstaple	7·07	Ilkley, York	4·75
Cefnfaes, Rhayader	6·98	New Brighton, Liverpool	4·67
Galway	6·96	Logierait, Perth	4·43
Bath	6·89	Leckpatrick, County Tyrone	4·40
Taunton	6·88	Guildford, Surrey	4·36
Cranbrook, Kent	6·74	Cork	4·34
Orleton, Worcester	6·68	Linton Park, Kent	4·25
Calne, Wilts	6·66	Portarlington	4·16
Selborne, Hants	6·52	York	4·04
St. Lawrence, Isle of Wight	6·51	Waterford	3·96
Killaloe	6·47	Beadlam Grange, Yorkshire	3·95
Norton in Hales, Salop	6·47	Mill Hill, Hendon	3·95
Kingham, Chipping Norton	6·10	Killingholme, Lincoln	3·93
Knaptoft, Rugby	5·98	Camden Town	3·89
Ayr	5·91	Waltham Abbey, Essex	3·83
Deanston, Stirling	5·89	Inisnag, County Kilkenny	3·66
Dumfries	5·88	North Shields	3·60
Northampton	5·85	Boston, Lincoln	3·55
Malvern	5·79	Waringstown, County Down	3·48
Banbury	5·63	Hawick, Roxburgh	3·43
Lochbroom, Rosshire	5·62	Twickenham	3·42
Hythe, Kent	5·54	Staines	3·41
Braystones, Whitehaven	5·39	Culloden, Inverness	3·07
Hereford	5·30	Culford, Bury St. Edmunds	3·01
Glasgow	5·21	Aberdeen	2·99
Doo Castle, Sligo	5·20	Middlesboro'-on-Tees	2·96
Shrewsbury	5·19	Hillington, Norfolk	2·89
Broomsgrove	5·17	Ballater	2·83
Bromley Common, Kent	5·15	Wisbech	2·79
Great Missenden, Bucks	5·15	Monkstown, Dublin	2·70
Owendoon, County Cavan	5·13	Sandwick, Orkney	2·65
Auchterarder, Perth	5·00	Sutton Park, Bedfordshire	2·40
Markree, County Sligo	4·97	Helmsdale, Sutherland	2·30

TABLE III.—Rainfall in September, 1866, compared with the mean in September, 1860-65.

[Stations in order of greatest relative excess, *i.e.*, showing by their sequence where the excess has been most remarkable.]

Stations.	Total.	Excess.	Ratio. Mean100	Stations.	Total.	Excess.	Ratio. Mean100
Taunton	6·88	+5·22	414	Culford	3·01	+1·40	187
Goodamoor	14·40	9·75	309	Cefnfaes	6·98	3·14	182
Clifton	7·40	4·79	284	Bolton	8·66	3·77	177
Selborne	6·52	4·08	267	Coniston	12·10	5·24	176
Haverfordwest	9·51	5·80	256	York	4·04	1·70	173
Orleton	6·68	3·99	248	Camden Town	3·89	1·63	172
Banbury	5·63	3·26	237	Auchterarder Ho.	5·00	1·95	164
Shrewsbury	5·19	2·99	236	Seathwaite	21·35	8·14	162
Arncliffe	11·19	6·23	226	Ayr	5·91	2·18	158
Dumfries	5·88	3·15	215	Cessnock Park	4·84	1·77	157
N. Shields	3·60	1·90	212	Killaloe	6·47	2·31	155
Derby	4·79	2·44	204	Monkstown	2·70	·71	135
Broomsgrove	5·17	2·57	199	Portarlington	4·16	·88	127
Manchester	7·13	3·43	193	Waterford	3·96	+ ·83	126
Linton Park	4·25	2·03	191	Portree	9·11	—1·66	84
Barnstaple	7·07	3·30	187	Sandwick	2·65	—1·01	72
Deanston	5·89	+2·74	187				

Not having yet received the returns of rainfall in September from our French correspondents, we are only able to mention the not generally known fact, that many of the Departments have suffered severely from the inundations caused by the excessive rains of the past month.

The *Journal de la Nièvre* says :—

"We regret to learn that the inundations of the Seine have seriously affected one of the most important industries in the department of the Nièvre—the commerce in wood. The floods took place at the moment when the supply for Paris was in process of collection, and the greater part has been carried away by the waters. The damage is immense. Such a disaster has not occurred since 1836."

A letter from Paris, dated October 5th, says :—

"The waters of the Seine, that had been falling for the last few days, showed a slight ascensional movement yesterday. The level of the river marked only 4 metres 70 centimetres on Wednesday, but yesterday it stood at 4 metres 80, by the graduated scale of the Pont Royal. There is every reason to believe, however, that this fluctuation will be but slight, as it is very probable that the inundation has done its worst. It must not be supposed, however, that the amount of actual mischief done will have any great effect upon the general prosperity of the country. Many of the departments have not suffered in the least, and in those that have been most exposed to the water only a very small portion of the soil has been rendered unfit for the autumn sowing. In fact, the disasters may be said to be entirely local, almost like those produced by hail and other storms, which seldom produce any great deficit in the total of the country's produce. The rise, therefore, that has just taken place in bread and other necessary articles of consumption, appears to me scarcely justified, and it is very probable that there will be a corresponding fall, especially if the weather should turn out fine enough to allow the October sowing to be proceeded with without interruption. As regards the poorer classes of sufferers, the appeals for aid undertaken by the authorities are being pretty generously responded to, and already more than 200,000f. has been collected."

It is satisfactory to be able to add that October has hitherto been characterized almost universally by weather the opposite of September —viz., high barometer and no rain. It is rather worth noting, that this year has been in marked contrast to 1865 in many points—especially that September, 1865,was as remarkably dry as 1866 was wet, and that at present October bids fair to be as dry as October, 1865, was wet.

We need hardly say that this change has been of incalculable benefit to the farmers, reports from all parts bearing uniform testimony.

HARVEST OF CANADA.

The Grand Trunk Railway Company have made their usual collection of reports on the harvest from the various districts through which the railroad passes. The *Montreal Herald* states the result as follows:—"These reports show the truth of the opinion generally formed, that while the appearance of the harvest in the early part of the season was remarkably fine, the excessively wet weather has to a great extent frustrated the hopes of the cultivator, except in the extreme west, where the grain ripens early. The further we come eastward the worse appears to be the position of affairs. Thus in place of the abundance which was reasonably anticipated at Midsummer, we fear that we can hardly expect an ordinary average crop throughout the country." The *Toronto Globe* says :—"It will be seen that, notwithstanding the unfavourable harvest weather of the past month, the crops generally may be said to be good. The injury caused by the rain has not been so great in the Western portion of the province as in Central and Eastern Canada. When the wheat is thrashed Canadian farmers will have no reason to complain. The coarse grains are far above the yield of past years. Barley a good yield, but of a very poor colour, owing to the rains. On the whole, although the extravagant anticipations of Midsummer are not realized, the gloomy forebodings of the earlier part of the season are still further wide of the mark."

RAINFALL IN SEPTEMBER, 1866.

Div.		STATIONS. [The Roman numerals denote the division of the Annual Tables to which each station belongs.]	Height of Gauge. Above Ground		Above Sea Level.	Depth of Rain. Total Fall.	Difference from average 1860–5	Greatest Fall in 24 hours. Depth.	Date.	Days on which ·01 or more fell.
			ft.	in.	feet.	inches.	inches.	inches.		
I.	ENGLAND.	Camden Town	0	6	100	3·89	+1·63	·47	21	22
II.		Staplehurst (Linton Park)	0	6	296	4·25	+2·03	·81	8	23
,,		Selborne (The Wakes)	4	0	500 ?	6·52	+4·08	·82	4	27
III.		Hitchen	2	0	240	2·63	+ ·77	·31	9	24
,,		Banbury	7	0	345	5·63	+3·26	·94	4	27
,,		Wisbech	0	6	10	2·79	...	·45	4	19
IV.		Bury St. Edmunds (Culford)	1	2	...	3·01	+1·40	·52	8	21
V.		Calne	0	11	250	6·66	...	·77	4	27
,,		Plymouth (Goodamoor)	0	2	580	14·40	+9·75	1·74	5	27
,,		Barnstaple	0	6	31	7·07	+3·31	1·05	4	30
,,		Taunton (Fulland's School)	1	4	...	6·88	+5·22	·94	5	27
VI.		Shrewsbury (Highfield)	5	6	200	5·19	+2·99	1·00	28	19
,,		Tenbury (Orleton)	0	9	200	6·68	+4·00	·97	29	29
VII.		Leicester (Wigston)	0	6	220	5·43	+3·22	·65	4	24
,,		West Retford	0	6	50	...	...	...	...	...
,,		Derby	5	0	180	4·79	+2·45	·51	16	27
VIII.		Manchester	2	7	106	7·13	+3·43	1·15	5	25
IX.		York	0	6	50	4·04	+1·71	·51	6	27
,,		Skipton (Arncliffe)	3	0	750	11·19	+6·23	·95	21	26
X.		North Shields	1	0	124	3·60	+1·90	·76	8	22
,,		Borrowdale (Seathwaite)	1	0	422	21·35	+8·14	3·30	21	29
XI.	WALES.	Abercarn	1	3	450	13·39	...	1·83	4	26
,,		Haverfordwest	2	0	60	9·51	+5·80	1·00	7	23
,,		Rhayader (Cefnfaes)	2	0	880	6·98	+3·14	·85	6	27
,,		Llanberis (R. Victoria Hotel)	1	0	370	13.05	...	1·96	10	24
XII.	SCOTLAND.	Dumfries	0	5	70	5·88	+3·15	·71	28	26
,,		Hawick (Silverbut Hall)	4	0	512	3·43	...	·97	28	25
XIV.		Ayr (Auchendrane House)	2	3	94	5·91	+2·17	1·23	20	23
XV.		Otter House	0	6	130	...	...	...	...	...
XVI.		Leven (Nookton)	0	6	80	2·73	+ ·25	·41	18	21
,,		Stirling (Deanston)	0	0	130	5·89	+2·74	·93	18	22
,,		Logierait	1	0	250	4·43	...	·70	28	19
XVII.		Ballater	0	10	656	2·83	...	·68	28	16
,,		Aberdeen	4	8	115	2·99	...	·45	28	22
XVIII		Inverness (Culloden)	3	0	104	3·07	...	·52	14	15
,,		Fort William	0	8	20	9·43	...	1·54	18	26
,,		Portree	0	4	60	9·11	—1·66	1·45	20	24
,,		Loch Broom	0	8	48	5·62	...	·90	20	20
XIX.		Helmsdale	1	0	34	2·30	...	·42	14	16
,,		Sandwick	2	0	78	2·65	—1·01	·50	2	14
XX.	IRELAND.	Cork	6	0	65	4·34	...	·57	15	28
,,		Waterford	4	0	60	3·96	+ ·83	·49	9	25
,,		Killaloe	5	0	128	6·47	+2·31	·74	10	24
XXI.		Portarlington	9	0	236	4·16	+ ·88	·71	7	27
,,		Monkstown	0	6	100	2·70	+ ·71	·65	9	21
XXII		Galway	6	0	25	6·96	...	·93	14	24
,,		Bunninadden (Doo Castle)	1	0	...	5·20	...	·90	20	27
XXIII		Bawnboy (Owendoon)	1	3	218 ?	5·13	...	·82	13	24
,,		Waringstown	0	4	191	3·48	...	·50	18	23
,,		Strabane (Leckpatrick)	0	5	260	4·40	...	·85	13	22

+ Shows that the fall was above the average ; — that it was below it.

METEOROLOGICAL NOTES ON THE MONTH.

ABBREVIATIONS.—Bar. for Barometer; Ther. for Thermometer; Max. for Maximum; Min. for Minimum; T for Thunder; L for Lightning; T S for Thunderstorm; R for Rain; H for Hail.

ENGLAND.

CAMDEN TOWN.—T S and H with rainbow and bright sunshine, all at the same time, from 5.15 to 5.30 p.m., on 2nd; Fog on 25th.

LINTON PARK.—T on the 8th, and more distantly on 23rd; heavy R on both occasions. The whole month wet and often windy, contrasting strongly with September, 1865. R on 23rd caused a slight flood in the rivers; the last three days fine and dry. Harvest operations much retarded where not completed in August, and hop-picking (an important affair in this county) has also proceeded under difficulties. Wind mostly S., S.E. and S.W., the last day the hottest in the month.

SELBORNE.—The almost incessant rain rendered it impossible to get in the corn, much of which is damaged, as are also some of the hops. L on 2nd. T on 6th, 17th, and 20th. Aurora on 15th and 16th.

BANBURY.—T S and H at 3.15 p.m. The wettest month since October, 1852. Harvest not yet complete. Max. 67°, min. 36°.

WISBECH.—H, L, on 2nd; T at 3 p.m., L at 8 p.m. on 15th. Gale, 7 lbs., on 11th. This was a dull wet month, the air frequently saturated (mean degree of humidity 93·7); the harvest work was much retarded; oat and pea straw much injured.

CULFORD.—T on 6th; max. 73° on 30th, min. 38° on 17th and 24th. One of the wettest Septembers on record in this locality.

CALNE.—Storms with T in N. on 2nd; R fell on every day, but less than ·010 on 19th, 22nd and 24th; stormy on 2nd, 5th, 6th, 10th, 11th, 14th, 15th and 21st. T S with H at 3 p.m., on 16th.

GOODAMOOR.—Fog 18th; stormy on 2nd, 4th, 5th, 6th, 9th, 13th, 14th, 15th and 18th; max. 72° on 30th. Total rain more than ever recorded except in November, 1852 (=15·54).

TAUNTON.—Max. 81°·5 on 28th. Rainfall throughout the month, except on 15th, 18th, and 20th; T S on 5th, 8th, and 23rd, the T on 8th being particularly sharp. The warm showers have produced luxuriant pasturage. Development of various fungi: mushrooms in abundance where never before noticed.

ORLETON.—T on 5th. A perfect contrast in all respects to this month in 1865, when R fell only on 2 days, and the sky was frequently cloudless. In this month R fell on every day but on 14th it was under ·01; there was very little sun, but generally a clouded sky, and rough changeable winds, and the temp. below the average; max. 66°·5 on 4th, min. 35°·5 on 23rd; bar. low throughout. This month's rainfall has been exceeded only five times in 36 years:—viz., July 1834=9·23 (with T S S), September 1852=7·07; November 1852=8·22, June 1860=7·25, July 1861=6·69. Brooks and rivers flooded at the end of the month.

DERBY.—Another unusually wet month, the rainfall for September and August being 11·35. For the last 9 weeks the bar. has been below 30 in., but it is now slightly above that reading.

MANCHESTER.—Since 1794 there has been no September with a rainfall anything like that of the present year. We may almost say we have had incessant R.

ARNCLIFFE.—One of the most continuously rainy months I have ever registered, and considerably more than double the average.

NORTH SHIELDS.—T on 2nd. Extremely cloudy and damp with very little sunshine.

SEATHWAITE.—R on every day except the 9th; more than 3 in. fell on the 21st, and nearly 3 in. on 11th, more than 2 in. on 3 days, and more than 1 in. on 7 days, in fact 13·58 in 7 days=1·95 each day and ·71 for each in the month, and yet from the prevalence of wind, the evaporation has been considerable and the corn harvest has suffered but little, though the potatoe crop is severely injured.

WALES.

ABERCARN.—Stormy on 10th, 16th, and 18th. Winds westerly till 17th, then southerly to the end. So wet a September has not been known for many years; the crops rotting on the ground, it being impracticable to haul them in.

HAVERFORDWEST.—The most stormy and disastrous September of which I have any record (during 17 years). Harvest operations much impeded by the continued heavy rains, and furious gales which prevailed almost without intermission till the 21st. T S on 23rd, at 5 p.m.

CEFNFAES.—A continuance of R, and occasionally gales of wind, chiefly from the S.W. ; there has not been an entire day and night without R, since the 27th August. Temp. cold for the season ; crops of grain of all kinds very seriously injured ; potatoe disease very much increased.

SCOTLAND.

DUMFRIES.—T on 1st; the month one of the wettest for above 17 years; harvest very protracted. Temp. low, being 6°·24 below that of last September; Bar. 30·13, on 30th, being the first time it has reached 30 in. since July 26th.

SILVERBUT HALL, HAWICK.—The coldest, wettest, windiest, and dullest September we have had here for many years. The turnips and mangold wurzels, those unamiable crops, which will not thrive in pleasant weather, have a most luxuriant appearance; but there are doleful complaints about the prevalence of the potatoe disease, and all the corn crops (of which there are still many fields to cut) have suffered more or less from the drenching R.

AUCHENDRANE.—High floods in the river on 20th, at 7 p.m. Although the rainfall has been excessive, the moderate temperature, and brisk winds have combined to protect the grain crops from injury.

DEANSTON.—T on 1st; very dull and wet. Grain crops not all secured at the end of the month, and some even not cut in the higher lands.

LOGIERAIT.—A very wet month; much corn still ungathered.

BALLATER.—Aurora on 16th; beautiful lunar rainbow on 18th; gale on the 25th; a fir tree uprooted thereby. In consequence of the backwardness of the weather, the harvest is much later than last year, and much of the corn is mixed up with a second growth.

ABERDEEN.—T S 1st and 2nd; a dull, close, wet, unseasonable month; humidity 10 per cent. in excess of mean of last 10 years; wind rather below the mean; ozone very deficient. Aurora on 7th, 13th to 17th, 19th, and 21st.

CULLODEN.—Fog on 29th. Aurora on 16th. Lunar rainbow, 7 p.m. on 26th.

FORT WILLIAM.—Fresh snow on Ben Nevis on 14th, and again on 21st; T on 25th.

PORTREE.—T on 2nd, & T S with heavy hail showers on 21st; solar halo on 4th; lunar halo on 21st and 27th. Gale on 25th; frost on 4th and 18th. No harvesting could be done during the month, so that the crops are in bad order, but the farmers have great hopes of October, and at present it looks well for the gathering in of the crops. Scarlatina still continues; people of all ages, including a great number of children, have died from it, otherwise the island is healthy.

LOCHBROOM.—Gale on night of 9th ; T on 10th, and stormy on 11th ; from the 17th to the end, R on every day except the 24th, 25th, and 26th. The weather was warm but unpropitious for the housing of crops which are now, notwithstanding, safely secured except in a few cases. The rainfall was in excess of the six preceding months, causing much anxiety to the farmer. Turnips are luxuriant, but signs of the disease are appearing.

SANDWICK.—T and heaviest fall of R on 2nd. Aurora on 7th, 8th, 15th, 18th, and 19th. Rainfall below the average, and below the mean of August, indeed it generally is so, as this is our little summer. The R in a series of years increases from the min. in May to the max. in October, with this exception in September. This last month and indeed all the summer has been fine in Orkney, so that a great part of the crop has already been secured in excellent condition, while much damage has been done in many southern parts of Britain.

IRELAND.

KILLALOE.—Storms on the 9th, 10th and 11th, all leaves and young branches exposed to these winds were completely blasted, the other side of the tree remaining green; violent wind again on 21st. The wettest September in 21 years except two, 1859 = 6·83 and 1861 = 7·57.

MONKSTOWN.—R frequent but slight; frost on 3 or 4 nights, Min. 28° on grass on 22nd ; 9th, 10th, and 11th, very wild weather, culminating in a terrific gale on the 11th.

DOO CASTLE.—Strong gale on 11th. In consequence of the persistent rainfall, all farm produce has been injured; I have been told, and by a very competent authority, that it will show a falling off of between a third and a half. About 5 miles from hence, a tropical shower fell on the 14th, which literally tore up the road and formed a rapid stream in 20 minutes. Last 3 days of the month very fine.

OWENDOON.—High winds on 9th & 10th. Reaping commenced on 18th. The constant wet greatly retarded all farming operations this month, and the whole country was beginning to despond; the weather, however, seemed to improve with the full moon on the 23rd, and we are in hopes that little damage is done, except on the flooded districts.

WARINGSTOWN.—T S with H at 3 p.m. on 15th; T shower very cold on 21st. Wet, stormy, and cold; such weather has rarely been experienced during the harvest in this district, but from the cold high winds, the damage to grain from sprouting has not been as great as might otherwise have been expected.

LECKPATRICK.—Very wet month; incessant R from the 10th to the 22nd; very unfavorable for harvest operations.

BELTON VICARAGE, LOUGHBOROUGH, *Sept. 19th*, 1866.—SIR,—I send you the following extract from my rainfall register, seeing from the Magazine that you have not hitherto had any figures so high communicated to you for August 28th. From 8·30 a.m. August 28th, to 8·30 a.m. August 29th, 2·84 in.: but from noon August 28th, to noon August 29th, 3·01 in.; total for August, 5·52 in. Your obedient servant,—R. DALBY.

EARTHQUAKE AT BUDLEIGH, SEPTEMBER 13TH.

To the Editor of the Meteorological Magazine.

DEAR SIR,—The enclosed letter is from the *Exeter Gazette*. The sensation felt by the writer was, that somebody was shaking the shutters from outside. East Budleigh is 4 miles W. of Sidmouth. I cannot find that it was felt or noticed here, but a gentleman told me he distinctly felt it at Branscomb, 4 miles E. of Sidmouth. Barometer 29·740 Ther. 62°·2. Truly yours,

Belgrave, Sidmouth. J. INGLEBY MACKENZIE, M.B. Cantab, F.M.S.

P.S.—Our average annual rainfall here is about 28 inches; up to September 30th this year I have registered 30·35.

To the Editor of the Exeter and Plymouth Gazette.

SIR,— Two distinct shocks were felt here at a quarter to ten on Thursday night. The windows of my house rattled violently. About five minutes elapsed between the two shocks, and the last was the more violent of the two. I believe that the cause was an earthquake. The night was quite calm at the time.

Your obedient servant,

East Budleigh, September 14th, 1866. R. H. LIPSCOMB.

METEORS.

KING'S CROSS, HALIFAX.

September 1st, 8.45 p.m. local time.

Meteor in S., first seen 10° above horizon, a little E. of Jupiter and below him; moved steadily in an upward slanting direction towards S.S.W.; distance moved, about 20°; left a train of light; path, a straight line; burst into fragments; no noise. The Meteor itself and the fragments were deep red. Time, about 3 seconds. Sky dull on horizon; very many stars near zenith; wind low, and from S.S.W.

JOSEPH GLEDHILL, F.M.S.

To the Editor of the Meteorological Magazine.

SIR,—It may interest some one to know that as I was driving from Shap to Penrith, on the evening of the 27th of September, I saw a very fine Meteor, pale yellow, start from a point under the Pole Star and travel horizontally and slowly above the two upper stars in the Great Bear, fading away above Arcturus; its train was visible for some seconds, and was brightest in the middle of the track. The Meteor was brighter than Jupiter, which was shining at the time. I had no lights and could not see my watch; I should think it might be a quarter to eight, but you can ascertain the time the moon rose that night, and put the Meteor a quarter of an hour earlier. Yours, &c., T. H. F.